

Role of Oxidative Stress in Renal Transplantation: Bases for an n-3 PUFA Strategy Against Delayed Graft Function

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Resumen

Renal transplantation (RT) is considered the "gold standard" treatment for end-stage renal disease patients. Efforts should be made to reduce ischaemia-reperfusion (IR) injury, which unavoidably occurs in RT as long as several clinical settings, i.e. open-heart surgeries, prosthesis implantation, among others. It is well known that IR is primarily responsible for injury associated with RT. Consequently, tissue inflammation and organ dysfunction will ensue due to the occurrence of oxidative stress (OS) in the reperfused tissue, a condition generated when endogenous antioxidant defences become overwhelmed by a massive production of reactive oxygen species. Furthermore, OS is involved in the impairment of renal function, leading to deleterious conditions such as delayed graft function (DGF), which is a common clinical expression of IR injury in RT. Omega-3 polyunsaturated fatty acids (n - 3 PUFA) have been widely used in different clinical settings to counteract the deleterious effects of OS. Thus, based on the currently available literature, the central aim of this review was to propose an n - 3 PUFA-based strategy targeting the key role of OS in the pathophysiology of renal IR injury in order to encourage protection against the occurrence of DGF.

Palabras clave

Palabras clave de autor: [Oxidative stress](#); [reactive oxygen species](#); [ischaemia-reperfusion injury](#); [renal transplantation](#); [delayed graft function](#); [omega 3](#)

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Editorial

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